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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,723	04/15/2004	L. Pierre deRochemont	10116-102DIV2	6724
26486	7590	06/13/2005	EXAMINER	
PERKINS, SMITH & COHEN LLP ONE BEACON STREET 30TH FLOOR BOSTON, MA 02108			NGUYEN, DONGHAI D	
			ART UNIT	PAPER NUMBER
			3729	

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/824,723

Applicant(s)

DEROCHEMONT ET AL.

Examiner

Donghai D. Nguyen

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 13 and 14 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7 and 9-12 is/are rejected.
- 7) ☒ Claim(s) 4 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment filed on April 08, 2005 has been considered and entered of record.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 5-7, and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,644,327 to Onyskevych et al in view of US Patent 5,691,498 to Fogle, Jr.

Regarding claims 1, 6, 7, and 9, Onyskevych et al disclose a method of constructing a composite structure, comprising the steps of: providing at least one electrical conductor (21, 27, etc see Fig. 4) to form a portion of an electrical network; providing at least one thermal conductor (24) to form a portion of a thermal network; and applying a ceramic dielectric material (31/32) to the electrical conductor, the thermal network and the electrical network being encompassed by the dielectric material (Fig. 4). Onyskevych et al is silent about forming a direct covalent bond at a temperature less than 475 degrees C. between the electrical conductor and the dielectric material. However, Fogle, Jr. teaches the direct covalent bond (Chemical bond, Col. 4, lines 60-65) at a temperature less than 475 degrees C. (Col. 10, lines 10-13) between the electrical conductor (13/14) and the ceramic dielectric material (15) for improving adhesion and seal between metal and dielectric material (Col. 4, lines 64-65). It would have been obvious to

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one having ordinary skill in the art at the time the invention was made to modify the invention of Onyskevych et al by the teaching of forming covalent bond at a temperature less than 475 degrees C. between the electrical conductor and the dielectric material as taught by Fogle, Jr. for improving adhesion and seal between metal and resin/dielectric material.

Regarding claims 3, 5, see Fig. 4 of Onyskevych et al.

Regarding claims 10 and 11, Onyskevych et al disclose electrically connecting the at least one semiconductor device (10) to the electrical conductor and to the thermal conductor (see Figs. 4 and 6).

Regarding claim 12, Fogle, Jr. discloses the electrical conductor includes a round conductor (14 or 24, see Figs. 2 and 4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Onyskevych et al by utilizing the round conductive wire as the at least one electrical conductor as taught by Fogle, Jr. for achieving covalent bonded fusion between the conductor and the ceramic material (Col. 4, line 67 to Col. 5, line 1).

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Onyskevych et al/Fogle, Jr. as applied above, and further in view of US Patent 5,475,264 to Sudo et al.

Onyskevych et al/Fogle, Jr. as modified and relied upon above do not teach a step of providing at least one capacitor within the dielectric material and at least one capacitor being electrically connected between the electrical network and the at least one patterned electrically conductive member. Sudo et al. teach that capacitor connecting between conductive patterns (12 and 13, Sudo's fig. 2) reduces power supply noise and increase the DC supply capability (col. 5,

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lines 40-45 of Sudo). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the invention of Onyskevych et al/Fogle, Jr. by the teaching of providing at least a capacitor that connects between the electrical network and the pattern electrically conductive member as taught by Sudo et al. in order to form a desired structure as so to reduce power supply noise and increase the DC supply capability.

Allowable Subject Matter

5. Claims 13 and 14 are allowed.
6. Claims 4 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donghai D. Nguyen whose telephone number is (571)-272-4566. The examiner can normally be reached on Monday-Friday (9:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter D. Vo can be reached on (571)-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DN
June 6, 2005


MINH TRINH
PRIMARY EXAMINER